LOAN STRUCTURE

Time, staffing and space constraints prevent the valuation of all loan assets in a failing institution's portfolio. Therefore, the Estimated Recoverable Value (ERV) of all loan assets must be derived from a representative sample of the ERV's of individual assets. RAVEN selects samples based solely on book value. However, it measures **results** based on the ERV's of the sampled assets.

RAVEN calculates and displays the number of additional files to review (i.e., sample size minus number of files previously reviewed) for each Loan Structure in the pools function of the Structure Menu. The internal calculation of sample size is a function of number of assets in the pool, the variation in the book value within the pool and the level of confidence (probability) and precision (range) desired.

Sampling strategy consists of successive, cumulative sample pulls. The mission of a good sampling strategy is the optimal allocation of limited file review resources. The general strategy involves pulling broadly defined samples early in the process, therefore providing flexibility to respond to new or better information as it develops later in the file review process.

- Typically, the goal of the first sample is to audit and validate the accuracy of the loan download.

- The second sample ensures a representative distribution of sampled assets across broad asset types such as consumer loans, residential real estate loans, non-residential real estate loans, commercial loans, etc.

- Subsequent samples are oriented toward achieving representative distributions of sampled assets for particular bid offering structures.

- As the Resolution Project Coordinator (RPC) and the Resolution Team Leader (RTL) become more confident in the structure that will be offered, additional samples will generate higher actual confidence levels for particular pools. The priority for highest actual confidence is 1) optional pools, 2) required pools, and 3) excluded pools.

Tactically, the RPC or RTL determine the optimal number of files to review subject to space, manpower, lead time required by the bank to pull files, and the project time frame. This number is compared to the number of files to pull calculated by RAVEN. The number calculated by RAVEN may be too small, too many or just right. If the number is too small, pools can be subdivided or a higher level of confidence can be selected. If the number of additional files is too large, then pools are over specified or confidence is too high. If the number is just right, select **Get Sample** within the **Structure** submenu to generate the sample.

RAVEN version 4.1a segregates the OREO in a separate database entitled **Raoreo**. This eliminates the possibility of any OREO being sampled in an active loan structure and necessitates the creation of a structure exclusively containing OREO. The procedures outlined in this section apply to both loan and OREO structure creation.

Loan Structure Definitions

Structure	1. Something made up of a number of parts held or put together in a specific way. 2. The manner in which parts are arranged or combined to form a whole.
Loan Structure	The manner in which loans are organized into **Loan Pools**.
Loan Pool	A collection of loans having at least one **Loan Attribute** in common. **Loan Pools** are mutually exclusive within a **Loan Structure**, i.e. a loan can be in one and only one **Loan Pool** in each **Loan Structure**.
Loan Attribute	A quality, characteristic or distinctive feature that can be used to describe a Loan.
Loan Attributes	The user selects loan attributes in **Loan Pool Filter Statements**.
Loan Pool Filter Components Statements	The set of instructions that RAVEN uses to assign loans to Loan Pools.

STRUCTURE CREATION DEMONSTRATION

A. Create a new Loan Structure

1. **Structure**

RAVEN asks the user to chose **Loans** or **OREO.**

2. Click on **Loans**

RAVEN displays the **Loan Structure Menu** which includes the following choices:

Structure	**Pools**	**Get Sample**	**Main Menu**

3. **Structures / Add**

4. Input text

a) Structure number: Preset to the number ***1*** (Enter)
b) Creator: [0-3 characters] ***"JTG"*** (Enter)
c) Description: [0-50 characters] ***"ALL LOANS"*** (Enter)

5. Click on **Save** and select **Stop**

When the user clicks on **Save**, RAVEN saves the structure and resets the input screen to allow for input of another structure.

6. If the user clicks on **Cancel**

RAVEN displays the **Cancel Confirmation** window and gives the user the option to cancel or return to input.

NOTE:
When the RAVEN program is in the add mode, selecting Stop allows the user to verify that the Structure descriptions just created are correct. Once verified, the user clicks on Add to return to the add mode.

7. Select **Exit**

RAVEN returns the user to the main **Loan Structure Menu**.

8. Click on **Pools** / **Add**

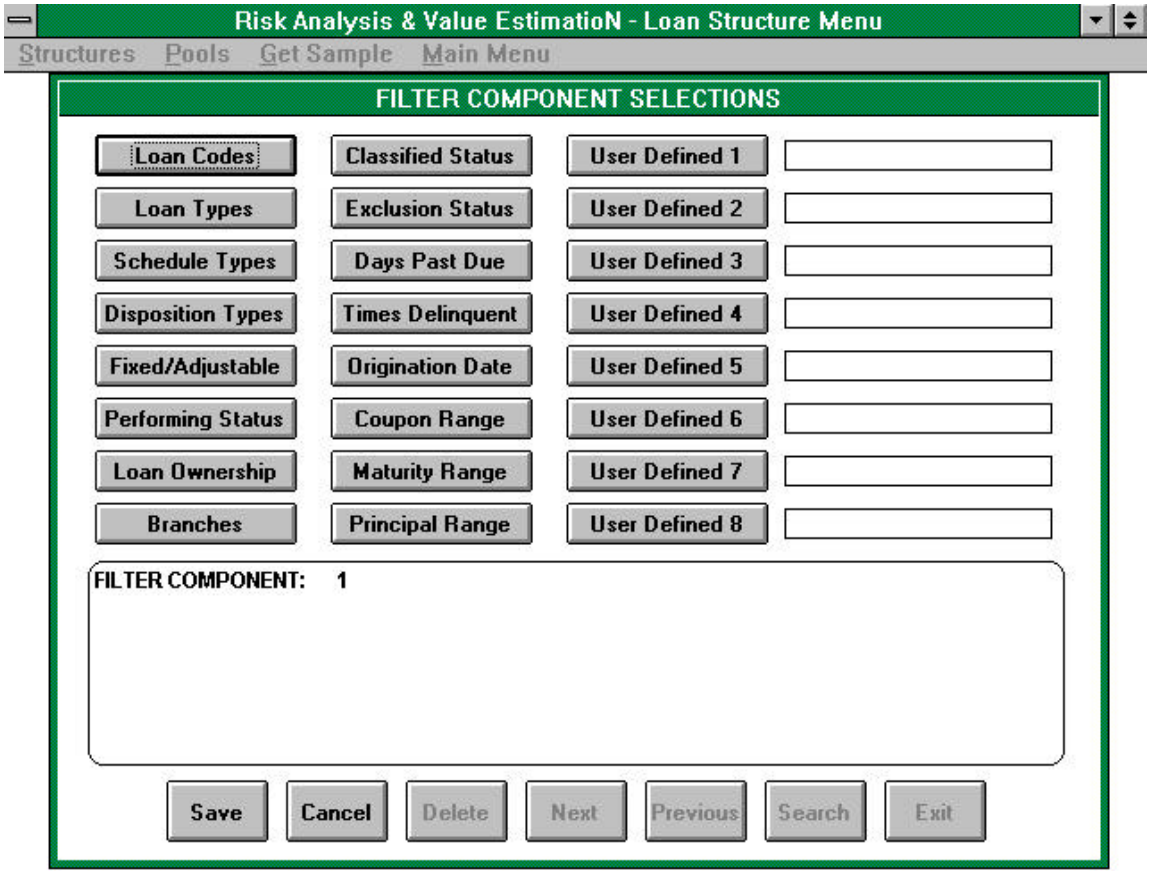
9. Input text

   a) Pool Description: ***"All loans in the financial institution"***
   b) Pool Number: ***"100"*** (Numeric field only)
   c) Pool Disposition: ***"Required, Optional, Not Offered"***
   d) Preset to the creator of the structure (Enter)
   e) Target Confidence Level: Click on **Low**

   Note: The **Pool Description** field transfers to **Schedule 109. Pool Disposition** determines the location of the pool on **Schedule 109.**

10. **Save**

RAVEN displays the following **FILTER COMPONENT SELECTIONS** window:



11. Select **Principal Range**

    RAVEN asks the user to select either **Point, Range** or **Cancel.**

12. Select **Point**

    RAVEN then asks the user to select a Principal Balance of $0.00 or more. In this case the user wants to include all of the loans in this pool.

13. Input **".01"**

    This tells RAVEN the user wants to include all loans that have a balance of $.01 or more (i.e., all of the loans). Once input, the lower section of the **Filter Components Window** displays:

    FILTER COMPONENT: 1
    Loans With A $0.01 Balance Or More

14. Select **Save / Exit**

    This takes the user back to the **Loan Pools** window and RAVEN automatically resets the input items so that the next pool can be input.

    NOTE:
    If the user would like to see that the pool just created is correct, click on Stop after saving the loan filter component and the "ghosted" window will show the pool. To add a new pool, the user clicks on Add to reset the input window for input of the next pool. Therefore, the steps to follow are (starting in the FILTER COMPONENT SELECTION window): Save after entry of the component, Stop, and then Add.

15. **Stop** to exit the **Add** mode

16. **Edit** to activate the **Update** button

17. Select **Update**

    RAVEN displays the **Save Confirmation** window with the following message:

    "Any changes must be saved prior to updating so that the update process may account for those changes.

    Do you wish to proceed with the update? Yes / No"
    Yes updates the database. **No** returns the user to the **Loan Pools** window.

18. Click on **Yes**

Selecting **Update** causes RAVEN to complete two actions. The first is to assign a pool number to each loan in within a specific structure which is saved to a field named **Ln_poolno** in the **Raloan.dbf**. In this case there is only one pool,
therefore all of the loans in the database will be assigned that pool number. If the user builds more than one pool within the structure, then RAVEN would assign a pool number to each individual loan according to the filter components defined for each individual pool. A thermometer monitors the update function which shows the user the progress of assigning the pool numbers.

RAVEN then runs the sampling routine for each pool and mathematically determines the number of loans that, **if committed**, will be sampled for that or those particular pool(s). A thermometer shows RAVEN getting the sample information which is displayed, when complete, at the bottom of the **Pool** and **Portfolio** columns in the **Loan Pools** window.

The update returns the following results:

Loans in Pool/Portfolio -	**2,064**
Book Value -	**$61,929,693**
Add'l Loans to Sample -	**87**
$ Percent of Pool/Portfolio -	**100%**

19. Select **Stop / Exit**

NOTE:
Loan Pools within any one Loan Structure are mutually exclusive. A loan cannot belong to more than one Loan Pool in the same Loan Structure. RAVEN prevents a loan from being included in more than one Loan Pool within a Loan Structure by sorting loan pools in numeric order and adding the instruction, "EXCLUDING All Loans In Prior Pools," to the definition of each Loan Pool Filter.

HINT:
Use numeric pool names and leave room in the numbers to insert new pools, i.e. 100, 150, 200 etc. Later 125, 175, etc., can be inserted, and subsequently 105, 110, 115, 120, etc.

NOTE:
The pool description should adequately describe the contents of the Loan Pool. The descriptions will appear on the reports.

NOTE:
Default Confidence/Precision levels are set at:

95% / 10% for High,
90% / 15% for Medium,
80% / 20% for Low.

The sample size calculation in the Loan Structure module is an estimate based on book values since that is all that is known prior to the file review. After the files have been reviewed and ERV calculated, RAVEN calculates 80%, 90% and 95% confidence intervals for the ERV for each Loan Pool in Reports / Asset Valuation Review / Statistical Analysis-OREO (Loans).

WARNING:
Thought must be given to the numeric arrangement of the pools in order to get the desired loans in the correct pools. For example, if the user defines Pool 100 as all 1-4 Family Loans and Pool 200 is defined as all performing loans, the result will be different than if Pool 100 is defined as all performing loans and Pool 200 is defined as all 1-4 loans.

The following Edit and Delete instructions are informational only.

DO NOT DO THESE AT THIS TIME.

To edit a structure or an individual pool within a structure:

1. From the Main Menu click on **Structure / Loans**
2. **Structures** or **Pools**
3. Chose **Next** or **Previous** to find the structure or pool that the user would like to edit
4. **Edit**
5. Edit the structure or pool as needed
6. **Save**

7. Click on **Update**

   While in the pool module, this function updates all pool information for the structure chosen.

   RAVEN displays a wait window with the message *"Assigning pool numbers"* and then *"Getting Loan sample information"*

8. Select **Stop**

9. **Exit**

   While in the **Structure** module, this function updates the pool information for the structure chosen.

To delete a structure or an individual pool within a structure:

1. From the Main Menu, click on **Structure / Loans**

2. **Structures** or **Pools**

3. Chose **Next** or **Previous** or **Search** to find the structure or pool that the user would like to delete

4. Click on **Delete**. RAVEN asks for confirmation of the Delete command

5. Click on **Yes**

   RAVEN deletes the structure or pool.

To commit the sampled loans:

1. From the **Main Menu**, click on **Structure / Get Sample**

2. RAVEN displays the **COMMIT LOAN SAMPLE CONFIRMATION** window saying:

   "Get Sample" is an irrevocable process. Do you wish to continue? Yes / No"

3. Click on **Yes**

   RAVEN opens a thermometer window showing the sample being pulled and a percentage of completion.

4. RAVEN displays a **Pull List Sort Order** window requesting the user to chose whether to sort and print the sampled loan pull list by **Name** or **Account Number.**

5. Click on **Account Number**

6. RAVEN then displays the **Branch Grouping Confirmation** Window stating:

   "*Do you wish to have the Pull List grouped by branch? Yes / No"*

7. Click on **No**

8. Click on **View** and **Zoom In**

9. Click on **OK** / **Exit**

EXERCISE

A. Create a Structure

1. Create an intermediate structure

   a) From the **Main Menu**, click on **Structure / Loans**

   b) **Structures**

      RAVEN displays the **Loan Stuctures** window with Structure 1 ghosted in the input windows

   c) Click on **Add**

      RAVEN populates the Structure with number 2

   d) Input the following:

Structure Name: Preset to the number 2		(Enter)
Creator:	***"JTG"***	(Enter)
Description	***"Loan Structure II"***	(Enter)

e) Select **Save**

f) Select **Stop**

g) Select **Exit**

B. Create Individual Loan Pools to Better Identify the Collateral Types

1. Create a pool of consumer loans

a) **Pools**

RAVEN displays the **Loan Pools** window for Structure Number 2, described as Loan Structure II.

b) Click on **Add**

c) Input:

Description:	***"Consumer Loans"***	
Pool Number:	***"100"***	(Enter)
Disposition:	***"O"***	
Creator:	Preset to the creator of the structure	(Enter)
Target Confidence Level:	Click on **Low**	(Enter)

d) Select **Save**

RAVEN takes the user to the **FILTER COMPONENT SELECTION** window

e) Click on **Loan Codes**

RAVEN displays a **Loan Codes selections** window asking the user to "*Please make a selection. Loan Codes / Cancel"*

f) Click on **Loan Codes**

RAVEN displays the **Loan Codes & Descriptions** window listing the codes identified in the **Loan Assumptions** module.

g) Select **Home Improvement**

Filter component number 1 now reads Home Improvement Loans

h) Select **Save / Add**

Once again RAVEN highlights the Filter Components Selections choices.

i) Select **Loan Codes / Loan Codes**

j) Arrow down until **Vehicle** is highlighted

k) Press (Enter) or click the **right mouse button**

l) Select **Save / Exit / Stop**

The Loan Pools Pool filter window shows that pool 100 consists of *Home Improvement Loans or Vehicle Loans EXCLUDING All Loans In Prior Pools.*

This completes a pool of all consumer loans.

2. Create a pool of all Real Estate Loans

a) Click on **Add**

b) Input

Description:	***"Real Estate Loans"***	
Pool Number:	***"110"***	
Pool Disposition:	***"R"***	
Creator: Preset to	***JTG***	(Enter)
Target Confidence Level:	Click on **Low**	(Enter)

c) Select **Save**

d) Select **Schedule Types** from the Filter

e) Select **SFR / Save**

f) Select **Add**

g) Select **Schedule Types** again

h) Select **CRE**

i) Select **Save / Exit / Stop**

This completes the pool for all Real Estate Loans.

3. Create a pool containing all Commercial and Industrial loans

a) **Add**

b) Input:

Description:	***"Commercial & Industrial Loans"***	
Pool Number:	***"120"***	
Pool Disposition:	***"N"***	
Creator: Preset to	***JTG***	(Enter)
Target Confidence Level:	Click on **Low**	(Enter)

c) Select **Save**

d) Select **Schedule Types** from the Filter Components Selections window

e) Select **CAI**

f) Select **Save / Exit / Stop**

This completes the pool for Commercial and Industrial Loans

D. Generate the Pool and Sample information for this structure.

1. Click on **Edit** to activate the **Update** button

2. Click on **Update**

RAVEN displays the **SAVE CONFIRMATION** window indicating changes must be saved prior to updating.

3. Click on **Yes**

RAVEN displays two thermometer windows that tell the user it is *"Assigning pool numbers to loans"* and,
"Getting loan sample information"

4. After the update, RAVEN displays the sample and pool information in the sample section of the Loan Pools window.

NOTE:
The percentage displayed in the PORTFOLIO column and $ Percent of Portfolio row of the sample window indicates the percentage of the portfolio that has been sampled. If this percentage is less than 100% when completing the structure and updating all of the pools, not all of the loans in the Raloan database have been pulled. This outage should be investigated and corrected.

5. **Stop**

6. **Exit**

7. Commit the sample using instructions on page 14-9

SUMMARY EXERCISE

1. Create an OREO structure containing three pools, each pool containing a different OREO code.

2. Create a new loan structure named ***FINAL***

3. Create loan pools with the following names and characteristics:

NOTE:
The pools below do not appear in the order they should be created. The user should think about the order of the pools prior to creating the first one.

Other Mortgage Loans	-	All real estate not in 1-4 Single Family Residences pool
Consumer loans	-	All consumer loans
Commercial Performing	-	All performing commercial loans
Commercial Non-Performing	-	All nonperforming commercial loans
CD/Savings Secured	-	All commercial CD/Savings secured loans
1-4 Single Family Residences	-	SFRs, performing, non-classified
	-	Interim Construction, performing, nonclassified

4. Set confidence level and get sampling information for each of the pools created in step 2. Set the confidence level of the performing pools to medium.

5. Get sample, but **do not print the ADS sheets.**

SUMMARY EXERCISE ANSWER KEY

A. Create an OREO Structure and Pools

1. **Structure / OREO / Structures**

2. **Add**

3. Input:
   Structure Number: Preset at **1** (enter0
   Creator: ***"JTG"***
   Description: ***"OREO Final Structure"***

4. **Save / Stop / Exit**

5. **Pools / Add**

6. Input:
   Description: ***"Commercial Real Estate OREO"***
   Pool Number: ***"100"*** (enter)
   Pool Disposition: ***"N"***
   Creator: ***"JTG"***
   Target Conf. Level: **Low**

7. **Save**

8. **OREO codes / OREO codes**

9. Click on **77-Commercial Real Estate**

10. **Save / Exit**

11. Input:
    Description: ***"Single Family Residence OREO"***
    Pool Number: ***"110"*** (enter)
    Pool Disposition: ***"N"***
    Creator: Preset to **JTG** (enter)
    Target Conf. Level: **Low**

12. **Save**

13. **OREO codes / OREO codes**

14. Click on **80-Single Family Residence**

15. **Save / Exit**

16. Input:

Description:	***"Interim Construction OREO"***	
Pool Number:	***"120"***	(enter)
Pool Disposition:	***"N"***	
Creator:	Preset to **JTG**	(enter)
Target Conf. Level:	**Low**	

17. **Save**

18. **OREO codes / OREO codes**

19. Click on **94 - Interim Const Residential**

20. **Save / Exit**

21. **Stop / Edit / Update** / **Yes** This will get the sample and pool information

22. **Stop / Exit / Main Menu** / This will exit the **Structure** module

B. Create a Loan Structure and Pools

1. **Structure / Loans / Structures**

2. **Add**

3.

Structure Number:	Preset at number **3**	(enter)
Creator:	***"JTG"***	(enter)
Description:	***"Final Loan Pool Structure"***	
Target Conf. Level:	**Low**	

4. **Save / Stop / Exit**

5. **Pools / Add**

6. Input:
   Description: ***"Consumer Loans"***
   Pool Number: ***"100"*** (enter)
   Pool Disposition: ***"R"***
   Creator: Preset to **JTG** (enter)
   Target Conf. Level: **Low**

7. **Save**

8. **Schedule Types**

9. **Con / Save / Exit**

10. Input:
    Description: ***"Single Family Residence Loans"***
    Pool Number: ***"110"*** (enter)
    Pool Disposition: ***"R"***
    Creator: Preset to **JTG** (enter)
    Target Conf. Level: **Low**

11. **Save**

12. **Loan Codes / Loan Codes**

13. **80 - Single Family Residence**

14. **Performing Status / Performing**

15. **Classified Status / Non-Classified**

16. **Save / Add**

17. **Loan Codes / Loan Codes**

18. **94 - Interim Construction Residential**

19. **Performing Status / Performing**

20. **Classified Status / Non-Classified**

21. **Save / Exit**

22. Input:

Description:	***"All other Real Estate Loans"***	
Pool Number:	***"120"***	(enter)
Pool Disposition:	***"O"***	
Creator:	Preset to **JTG**	(enter)
Target Conf. Level:	**Low**	

23. **Save**

23. **Schedule Types / SFR**

25. **Save / Add**

26. **Schedule Types / CRE**

27. **Save / Exit**

28. Input:

Description:	***"Deposit secured loans"***	
Pool Number:	***"130"***	(enter)
Pool Disposition:	***"R"***	
Creator:	Preset to **JTG**	(enter)
Target Conf. Level:	**Low**	

29. **Save**

30. **Loan Codes / Loan Codes**

31. **03 - Commercial CD/Savings Secured**

32. **Save / Exit**

33. Input:

Description:	***"Performing, Commercial & Industrial Loans"***	
Pool Number:	***"140"***	(enter)
Pool Disposition:	***"O"***	
Creator:	Preset to **JTG**	(enter)
Target Conf. Level:	**Low**	

34. **Save**

35. **Schedule Types / CAI**

36. **Performing Status / Performing**

37. **Save / Exit**

38. Input:

Description:	***"All other Commercial & Industrial Loans"***	
Pool Number:	***"150"***	(enter)
Pool Disposition:	***"O"***	
Creator:	Preset to **JTG**	(enter)
Target Conf. Level:	**Low**	

39. **Save**

40. **Schedule Types / CAI**

41. **Performing Status / Non-Performing**

42. **Save / Exit**

43. **Stop / Edit / Update / Yes**

The OREO and Loan Pools windows should display the following results:

A. **OREO pool results**:

Pool Name	Assets in Pool
Commercial Real Estate OREO	51
Single Family Residence OREO	13
Interim Construction OREO	1

B. **Loan Pool results**:

Pool Name	Assets in Pool
Consumer Loans	1,262
Single Family Residence Loans	357
All other Real Estate Loans	211
Deposit Secured Loans	85
Performing Commercial & Industrial Loans	134
All Other Commercial & Industrial Loans	15